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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/621,149

07/15/2003

James L. Kroening

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EXAMINER

TRAN, DENISE

ART UNIT

PAPER NUMBER

2189

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/621,149

Applicant(s)

KROENING, JAMES L.

Examiner

Denise Tran

Art Unit

2189

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,9,11-14,19,32,33,35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,9,11-14,19,32,33,35 and 36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The applicant's amendment filed 2/11/10 has been considered. Claims 1, 4-5, 9, 11-14, 19, 32-33, and 35-36 are presented for examination. Claims 2-3, 6-8, 10, 15-18, and 20-31, 34, 37 have been canceled.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4-5, 9, 11-14, 19, 35, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Paterson et al., U.S. Patent No. 6,412, 042.

As per claim 1, Paterson teaches a method of writing information to a storage device, the method, implemented in the storage device comprising:

receiving a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20 );

determining two locations on the storage device to write the information (e.g., col. 11, line 60 to col. 12, line 20);

performing a single reading of the information to be written into a read buffer (e.g., col.11, line 60 to col. 12, line 20 );

writing the information to both of the two locations based on the single reading of the information (e.g., col. 11, line 60 to col. 12, line 20 );

wherein the read buffer of the storage device is not cleared between the writing of the information to both of the two locations (e.g., col. 11, line 60 to col. 12, line 20 );

wherein a first one of the two locations is within a reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20) and a second one of the two locations is outside of the reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20).

wherein the reserve area is a protected area that is protected from access by a host command (i.e., one of two areas is protected from retrieve data by host command until the other one has an error e.g., col. 11, lines 15-25; col. 18, lines 25-65 and et seq.) and a user is inherently taught by Paterson, col. 11, lines 15-25 because a host command or instruction is generated by a user or a host is controlled by a user.

claim 14, Patterson teaches a method of writing information to a single disk drive storage device, the method comprising:

receiving a command to write information to the single disk drive storage device (e.g., col. 11, line 60 to col. 12, line 20 );

determining if the command is a dual write command(e.g., col. 11, line 60 to col. 12, line 20 );

if the command is a dual write command:  
determining two locations on the single disk drive storage device to write the information(e.g., col. 11, line 60 to col. 12, line 20);

reading the information to be written into a read buffer(e.g., col.11, line 60 to col. 12, line 20 ); and

writing the information to both of the two locations on the single disk drive storage device based upon a single reading of the information(e.g., col. 11, line 60 to col. 12, line 20 );

wherein the read buffer of the storage device is not cleared between the writing of the information to both of the two locations (e.g., col. 11, line 60 to col. 12, line 20 );

wherein a first one of the two locations is within a reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20) and a second one of the two locations is outside of the reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20);

wherein the reserve area is a protected area that is protected from access by a host command (i.e., one of two areas is protected from retrieve data by host command until the other one has an error e.g., col. 11, lines 15-25; col. 18, lines 25-65 and et seq.) and a user is inherently taught by Paterson, col. 11, lines 15-25 because a host command or instruction is generated by a user or a host is controlled by a user.

As per claims 4-5, 9, and 11-13, Paterson teaches the information to be read being associated with a write command designated a dual write operation (e.g., col. 11, line 60 to col. 12, line 20) and a bit flag is inherently taught by Paterson because in a computer system, a command or data is recognized by a bit flag, such as a write bit flag; the storage device comprising a disk drive (e.g., fig. 1, el. 10); the information to be read contains a header designating a dual write operation (i.e., a write command is a header of data segment, e.g., fig. 12, el. 140; col. 11, line 60 to col. 12, line 20); the information is written to both of the locations during a same write cycle (e.g., col. 12, lines 1-20); the two locations comprise a first location and a second location based, the second location being upon a calculation performed on the first location (i.e., selecting the second location being upon comparing access time or error performed on the first location; e.g., col. 8, lines 50-60; col. 18, lines 35-45); and writing the information to both locations comprises writing the information to a plurality of locations comprising both locations and at least one additional location (e.g., col. 14, line 55 to col. 15, line 20).

Claims 35 and 36, Paterson teaches the reserve area of the storage device is determined prior to the writing of the information to both of the two locations (i.e., the addresses of the two locations, data and duplicate copy locations are determined prior to the writing of the information to both of the two locations; e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20); access to the first one of the two locations in the reserve area is not dependent upon accessibility of the second one of the two locations outside of the reserve area of the storage device (i.e., access to the two locations depends on time stamp or recently data; e.g., col. 7, lines 25-45).

Claim 19, Paterson data is first written into a location having a lower address than the location at which the data is written a second time (e.g., col. 45, lines 45-55).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paterson et al., US 6,412,042 (hereinafter Paterson), and further in view of Cheston et al. US patent No. 6,167,494 (hereinafter Cheston).

Claim 33, Paterson does not explicitly show the reserve area is not within the comprehension of the operating system. Cheston shows the reserve area is not accessible using the operating system (e.g., col. 3, lines 1-10); the reserve area is not within the comprehension of the operating system (e.g., col. 3, lines 1-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Cheston into the method of Paterson because it would increase data reliability by recovery data from the reserve area which is not accessible using the operating system.

6. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paterson et al., US 6,412,042 (hereinafter Paterson), and further in view of Assaf US patent No. 5,966,732 (hereinafter Assaf).

As per claim 32, Paterson does not explicitly show wherein the dual write command is a hard drive firmware command. Assaf shows a command is a hard drive firmware command (e.g., col. 3, lines 15-20; col. 5, lines 20-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Assaf into the method of Paterson because it would provide an easy in updating firmware comparing to hardware.

7. Applicant's arguments filed 2/11/10 have been fully considered but they are not persuasive.

8. In the remarks, the applicant argued that Paterson did not disclose "a first one of two locations is within a reserve area of the storage device and a second one of the two locations is outside of the reserve area of the storage" and "the reserve area is a protected area that is protected from access by a user or an operation system" and the computer system can not be restored to a state equivalent to when it left the manufacturer.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the computer system can not be restored to a state equivalent to when it left the



manufacturer) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In this case, No where in the claim state “the computer system can not be restored to a state equivalent to when it left the manufacturer.” Paterson teaches all the features in the claim: a method of writing information to a storage device, the method, implemented in the storage device comprising:

receiving a dual write command to write information to the storage device (e.g., col. 11, line 60 to col. 12, line 20);

determining two locations on the storage device to write the information (e.g., col. 11, line 60 to col. 12, line 20);

performing a single reading of the information to be written into a read buffer (e.g., col.11, line 60 to col. 12, line 20);

writing the information to both of the two locations based on the single reading of the information (e.g., col. 11, line 60 to col. 12, line 20);

wherein the read buffer of the storage device is not cleared between the writing of the information to both of the two locations (e.g., col. 11, line 60 to col. 12, line 20);

wherein a first one of the two locations is within a reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20) and a second one of the two locations is outside of the reserve area of the storage device (i.e., one of the two area stored for future use is a reserve area and the

other area is outside of the reserve area, e.g., col. 12, lines 30-45; col. 11, line 60 to col. 12, line 20).

wherein the reserve area is a protected area that is protected from access by a host command (i.e., one of two areas is protected from retrieve data by host command until the other one has an error e.g., col. 11, lines 15-25; col. 18, lines 25-65 and et seq.) and a user is inherently taught by Paterson, col. 11, lines 15-25 because a host command or instruction is generated by a user or a host is controlled by a user.

9. In the remarks, the applicant argued that Cheston did not have the feature of "read data once, then write data twice, into different locations on the drive."

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, the combination of Paterson and Cheston teaches all the limitations of claim 33. In particular, the combination of Paterson and Cheston teaches performing a single reading of the information to be written into a read buffer (e.g., Paterson col.11, line 60 to col. 12, line 20) and writing the information to both of the two locations based on the single reading of the information (e.g., Paterson col. 11, line 60 to col. 12, line 20).

10. In the remarks, the applicant argued that it has no motivation to combine based on impermissible hindsight.

In response to applicant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, Paterson does not explicitly show the reserve area is not within the comprehension of the operating system. Cheston shows the reserve area is not accessible using the operating system (e.g., col. 3, lines 1-10); the reserve area is not within the comprehension of the operating system (e.g., col. 3, lines 1-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Cheston into the method of Paterson because it would increasing data reliability by recovery data from the reserve area which is not accessible using the operating system.

In addition, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was

within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise Tran whose telephone number is (571) 272-4189. The examiner can normally be reached on Monday, Thursday, and an alternated Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald Bragdon, can be reached on 571-272-4204. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Denise Tran/

Primary Examiner, Art Unit 2189